

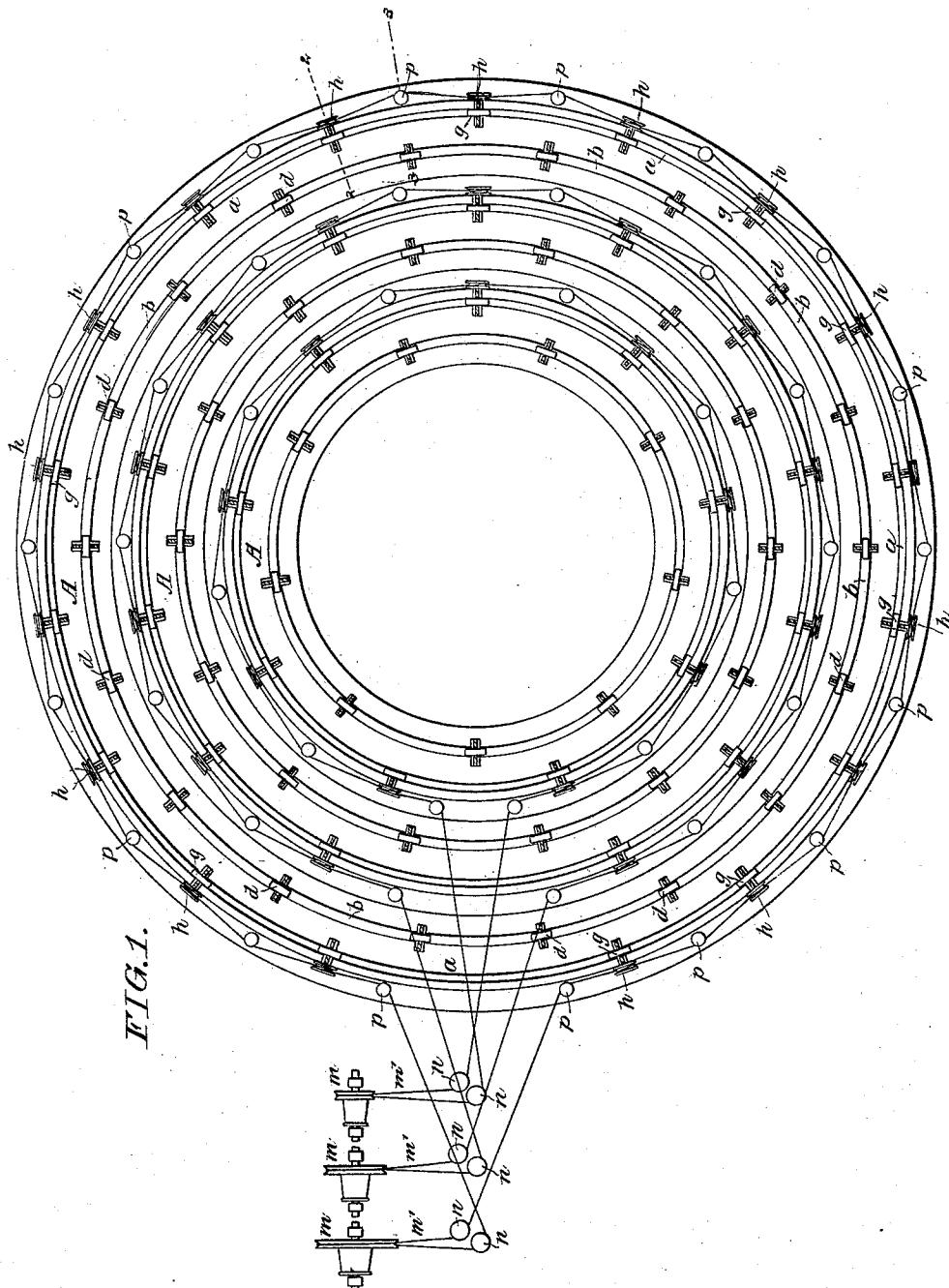
(No Model.)

2 Sheets—Sheet 1.

S. E. HUGHES.
CAROUSEL.

No. 553,468.

Patented Jan. 21, 1896.



Witnesses:

H. D. Goodwin
F. B. Benner

Inventor:

Smith E. Hughes
by his Attorneys

Houston & Houston

(No Model.)

2 Sheets—Sheet 2.

S. E. HUGHES.
CAROUSEL.

No. 553,468.

Patented Jan. 21, 1896.

FIG. 2.

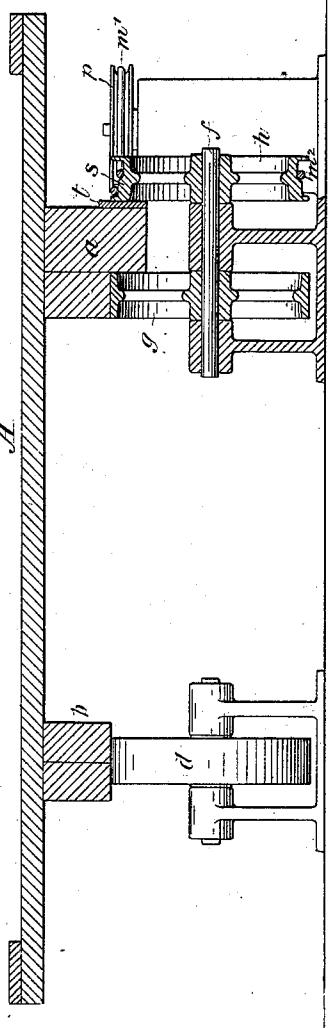
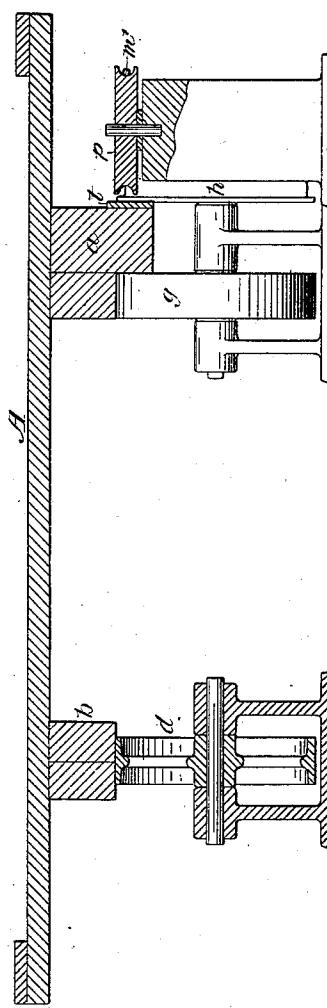


FIG. 3.



Witnesses:

F. D. Goodwin
F. B. Benner

Inventor:

Smith E. Hughes
by his Attorneys

Houason & Houason

UNITED STATES PATENT OFFICE.

SMITH E. HUGHES, OF PHILADELPHIA, PENNSYLVANIA.

CAROUSEL.

SPECIFICATION forming part of Letters Patent No. 553,468, dated January 21, 1896.

Application filed October 18, 1895. Serial No. 566,102. (No model.)

To all whom it may concern:

Be it known that I, SMITH E. HUGHES, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain 5 Improvements in Carousels, of which the following is a specification.

My invention consists of an improvement in that class of carousels or merry-go-rounds which have two or more independent platforms intended to be driven at different 10 speeds, so as to secure an effect of racing of the figures mounted upon the different platforms.

The object of my invention is to so support 15 and drive the platforms of the device that all lateral pull or strain upon the platforms or their bearings will be overcome, and said platforms can be driven with the exercise of a much less amount of power than usual. This 20 object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is an inverted sectional plan view 25 of a diagrammatic character of a carousel having three separate platforms and provided with supporting and driving devices for these platforms in accordance with my invention. Fig. 2 is an enlarged transverse section of the outermost platform, the section being taken 30 on the line 2 2, Fig. 1; and Fig. 3 is a similar transverse section taken on the line 3 3, Fig. 1.

The three platforms are represented at A in the drawings; but as the supporting and driving devices for these three platforms are 35 alike it will be necessary to describe them in connection with but one of the platforms, selecting, for example, the outermost platform of the three. On the under side of this platform are located two rails *a* and *b*, and beneath the inner rail, *b*, are located, at appropriate distances, suitable bearings for the radial shafts or spindles of a series of supporting-wheels *d*, while beneath the outer rail, *a*, are located a corresponding number of bearings 40 for a series of radial shafts *f*, and rigidly secured to each of these shafts *f* is a supporting and driving wheel *g* and a driving-drum *h*, as shown in Fig. 2, the bearings for the shafts *f* being, by preference, located midway 45 between the bearings for the shafts of the supporting-wheels *d*, so that the wheels *g* consti-

tute the sole support for the platform in radial lines drawn through the points where power is applied to rotate said platform.

There are as many main driving-shafts *i* 55 and as many main driving-pulleys *m* as there are platforms, and from each of these driving-pulleys extends a driving-rope *m'*, these ropes passing first around guide-pulleys *n* and thence alternately over guide-pulleys *p*, free 60 to turn on vertical shafts beneath the platform to be driven, and around the drums *h*, the guide-pulleys *p* being in practice so disposed in respect to said drum *h* as to prevent 65 as much as possible contact of the entering and leaving runs of the rope on each of said driving-drums. In order, however, to still further guard against contact of the entering and leaving runs of the rope on each drive-drum *I* form the rope-receiving periphery of 70 said drum in two different circumferential planes flanking each other, but one of slightly less diameter than the other, so as to form between these two planes an annular shoulder 75 *s*, over which one run of the rope must crowd its way in order to come into contact with the other.

Power being applied to the shafts *i*, each of the drums *h* is positively rotated and power is thus communicated to each platform at as 80 many points as there are supporting and driving wheels *g*, the number of these wheels being so regulated as to effect proper driving of the platforms under all possible conditions of use.

The rails *a* and *b* are preferably made of 85 wood, but on the outer side of the rail *a* of the outer platform, and, if desired, on the corresponding side of the rail *a* of each of the other platforms, is secured an annular 90 band *t* of metal, which, by contact with the rims of the drive-drums *h*, serves to retain the platform in its proper position and prevents chafing of the woodwork of the rail.

In the drawings I have shown the rail *a* as 95 composed of two parts; one of somewhat less depth than the other; but this is immaterial, as a rail similar to the rail *b* can be used in place of the rail *a* if desired, the driving-drum being so disposed that its inner face 100 will come into contact with the strip applied to the rail.

Although I prefer in all cases to use the two annular rails on the under side of the platform, because of the steady and unyielding support thereby afforded, there may be 5 cases where a single centrally-disposed drive-rail only can be used.

Having thus described my invention, I claim and desire to secure by Letters Patent—

- 10 1. A carousel or merry-go-round in which are combined an annular platform having a pair of annular rails on the under side of the same, radial shafts located at intervals beneath said platform, supporting wheels and combined supporting and driving wheels carried by said shafts and upon which the annular rails rest, driving drums carried by the shafts of the driving wheels, a main driving shaft, and a drive rope which passes in succession to and around the driving drums of the series, substantially as specified.
- 15 2. A carousel or merry-go-round in which are combined an annular platform having an annular drive rail on the under side of the same, radial shafts located beneath the platform and carrying combined supporting and driving wheels upon which the annular drive rail rests, driving drums also carried by said shafts, a main driving shaft, a drive rope, and 20 pulleys whereby said drive rope is directed in succession to the various driving drums of the series, some of said pulleys alternating with the drums so as to govern the direction of the run of the driving rope between the drums, substantially as specified.
- 25 3. A carousel or merry-go-round in which are combined an annular platform, an annular drive rail on the under side of the same, radial shafts beneath said platform, combined supporting and driving wheels carried by said shafts and on which said drive rail rests, driving drums also carried by said shafts, a main driving shaft, and a drive rope which 30 passes in succession to and around the various drums of the series, each of said driving drums having its rope receiving periphery in two circumferential planes flanking each other, but one of less diameter than the other

so as to form an intervening ridge or shoulder, substantially as specified.

4. A carousel or merry-go-round in which are combined an annular platform having on the under side an annular drive rail, radial shafts located beneath the platform, and carrying combined supporting and driving 55 wheels upon which said annular drive rail rests, driving drums also carried by said shafts, a main drive shaft, a drive rope which passes in succession to and around the various driving drums of the series, and a metallic chafing plate applied to a vertical face of the drive rail of the platform and serving, by contact with a vertical face of each driving drum, to retain the platform in its proper position, substantially as specified.

5. A carousel or merry-go-round in which are combined an annular platform, an annular drive rail secured to the under side of the same, radial shafts located beneath the platform and carrying combined supporting and 60 drive wheels, and drive drums, a main driving shaft, and a drive rope which passes in succession to and around the drive drums of the series, substantially as specified.

6. A carousel or merry-go-round in which are combined an annular platform, a pair of annular rails secured to the under side of the same, radial shafts located beneath the platform, some of said shafts carrying supporting wheels and the others carrying combined 75 supporting and driving wheels, the supporting wheels being disposed midway between the supporting and driving wheels, drive drums secured to the shafts of said supporting and driving wheels, a main driving shaft, 80 and a drive rope which passes in succession to and around the driving drums of the series, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of 90 two subscribing witnesses.

SMITH E. HUGHES.

Witnesses:

JOS. H. KLEIN.

FRANK E. BECHTOLD.